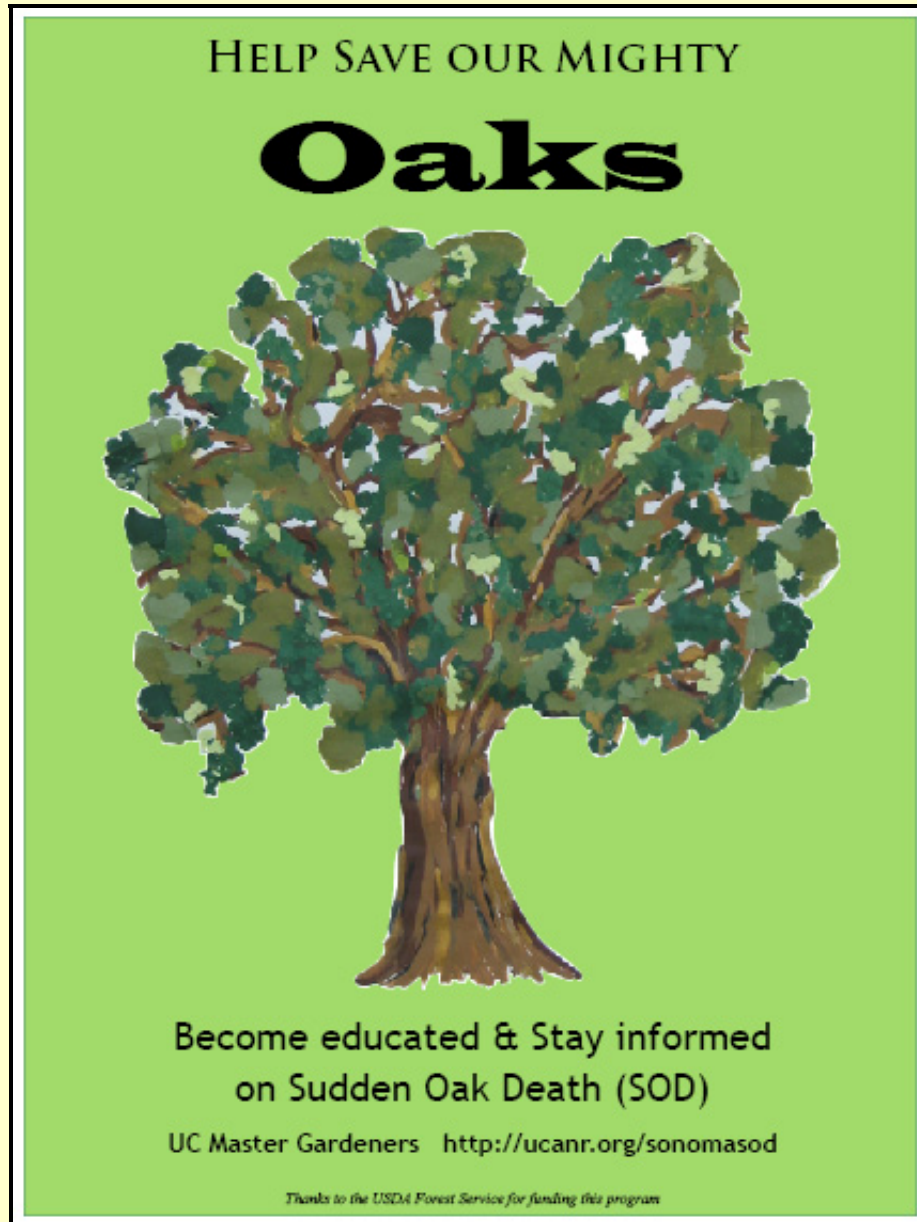


# Sudden Oak Death Outreach in Sonoma County



Sonoma County SOD Program poster at the Sonoma County Fair, 2009

Progress Report for the USDA Forest Service, June-December 2009  
09-DG-11052021-175

Prepared by L. Bell, P. Vossen, D. Curle  
Sonoma County UC Cooperative Extension

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Progress Report, June-December 2009  
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## Project Manager, Coordinators

Paul Vossen, *Project Manager*  
Farm Advisor  
UC Master Gardener Program Advisor  
UCCE Sonoma County

Lisa Bell  
SOD Program Coordinator  
Senior Agricultural Assistant  
UCCE Sonoma County

Deborah Curle  
UC Master Gardener Program Coordinator  
Senior Agricultural Assistant  
UCCE Sonoma County

## UC Master Gardener SOD Specialists

Marsha Anderson  
Cheryl Belitsky  
Janet Calhoon  
Ann Chambers  
John Chavez  
Alan Chesterman  
Becky Goodsell  
Ralph Hoag  
Helen Howard  
Glenda Klaucke  
Mimi Sleigh  
Phyllis Turrill  
Cathy Williamson

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## 1 Introduction

The **Sonoma County Sudden Oak Death Program** is a public outreach program that turns an already established group of environmental educators—the UC Master Gardeners—into local experts on sudden oak death. These “SOD Specialists” then present information about SOD biology, treatment, hazards and sanitation to local residents. Intensive training on sudden oak death issues began in June 2009. Presentations to the public began a month later at the Sonoma County Fair. Since then, the Sonoma County Master Gardeners have become the face of SOD education in Sonoma County.

Master Gardener SOD Specialist presentations target Sonoma County residents who want to know what to do keep their oaks healthy and to prevent SOD infestations on their property. A typical presentation explains pathogen biology, the role of secondary infections, hazards of dead and dying trees, safe disposal methods, and preventive measures that may save oaks. By promoting awareness of the disease and demonstrating preventive actions, we aim to decrease spore loads in the landscape and slow the rate of spread of disease within the County and across county lines.

## 2 Training

The Sonoma County UC Master Gardeners are a diverse group of 200 community-minded people interested in education and the environment. They come to the MG group with some knowledge of plants and gardening, and then attend a 100-hour training program to learn scientifically sound practices valuable to the home gardener. Training topics include soil, water, pests and pesticides, fertilizers, plant pathology, weed science, composting, growing fruits and vegetables, and native plant gardens.

A subset of these volunteers—the 13 SOD Specialist Master Gardeners—took part in additional training sessions about sudden oak death. The SOD Specialists received 52 hours of training on sudden oak death issues since the program began. Training is ongoing and planned as needed or as the opportunity arises. Here is a list of training sessions to date:

- *Fourth SOD Science Symposium, June 15-18, 2009. Santa Cruz, CA.* Six SOD Specialists attended the Science Symposium. It was an excellent opportunity to become immersed in the topic. They jumped into the world of SOD biology, management, nurseries, regulations, etc., with both feet. Here are some comments from the Master Gardeners after attending the Symposium.



Master Gardener SOD Specialists at training session in China Camp State Park.

“An excellent way to get into the seriousness of the problem and to realize how hard scientists are working on a solution. A wake up call for me. It was an impressive group of academics and interesting to listen even when the details were over my head.”

“First and foremost I feel so fortunate in having attended the Santa Cruz SOD conference in June. The educational components of the conference were just amazing and quite mind blowing at times. It was truly inspirational to witness the collaboration of so many dedicated researchers all sharing their scientific findings in hopes of decoding the mysteries of this devastating pathogen. I departed the conference with a deeper understanding of SOD and a greater sense of importance in sharing these findings with our community.”

“Talking with the stakeholder's or homeowner's [at Santa Lucia Conservancy] was a reality check. They gave us good ideas about how to engage the public about SOD. Community awareness is essential.”

“The field trip was helpful for a couple of reasons. I was able to witness the effect of SOD in the natural environment. And the sense of how this community [Santa Lucia Conservancy] was rallying together really helped me to see the importance of how the Master Gardeners will be most effective in working with our communities and implementing a SOD blitz.”

- **Agri-Fos® Demonstration Training** with Matteo Garbelotto and Doug Schmidt, 10am-3pm June 19, 2009 at China Camp State Park. Twelve SOD Specialists attended this training. It was extremely valuable to the group to walk through a *Phytophthora ramorum* infested forest and see SOD symptoms at various. Garbelotto and Schmidt covered Agri-Fos®



Glenda, SOD Specialist, practices drilling a hole in a piece of oak before injecting Agri-Fos®.

applications techniques, SOD biology, and tips on how to present this scientific information to the lay public.

- **Regulations.** Cree Morgan, Sonoma County Agricultural Commissioner Biologist. 10-11am, July 13, 2009. Cree is the Ag Commissioner’s SOD specialist. He talked with the group about the regulatory aspects of SOD at County, State and Federal levels; nursery inspections; and Agri-Fos® use.

- **How to Give a Presentation.** Pauline Haro, Sonoma County Master Gardener and public speaking coach. 10am-Noon, August 18, 2009.
- **Presentation practice session,** 10-Noon, August 31, 2009. Half of the MG group practiced giving presentations on SOD issues.
- **SOD biology,** presentation by Lisa Bell, 10am-1pm, September 4, 2009.
- **Agri-Fos® Application Demonstration Practice.** 3pm-5pm, September 8, 2009.
- **Presentation practice session,** 10am-Noon, September 11, 2009. Half of the MG group practiced giving presentations on SOD issues.
- **Oak identification and teaching SOD science.** Steven Swain and Janice Alexander, UCCE Marin County. 10am-3pm, September 15, 2009 at Pepperwood Preserve, Sonoma County. Swain led the group on a field trip to identify the many oaks in the area. Alexander talked about her experiences as a SOD educator throughout the state.
- **Agri-Fos® Application Demonstration Practice.** 3pm-5pm, October 23, 2009.
- **A tour of Sonoma Compost** is planned for February 2010. Sonoma Compost is a conscientious community business that prides itself in providing disease-free landscape materials for Sonoma County residents and businesses.

### 3 Outreach

#### *Presentations*

At the core of this outreach program are the two-hour public presentations given at libraries other public events. The structure of a presentation is: the first presenter spends 30 minutes talking about the history, biology, symptoms and recent research; the second presenter spends 30 minutes on another topic, for example, secondary infections and beetles. Then a third MG spends half an hour demonstrating Agri-Fos® injection and spray techniques and discussing other cultural SOD treatments and general oak health. The last half hour is filled with questions and answers with the audience. This presentation structure has been affective with audiences and is favored by the volunteer presenters because it allows them pool their knowledge and share the effort.



Ann, SOD Specialist, conducts an Agri-Fos® treatment demonstration at the Sebastopol Library.

Reaction from the audience has been very positive with many comments about the MGs' well-rounded and relevant presentations as well as their professionalism. Here are some comments received from audience members:

"To all that were a part of the SOD workshop yesterday: a big BRAVO!!!!!!!!!!!!!!  
I thought the workshop was full of easy to follow, well organized information. The pictures helped in understanding what to look for and the pace was perfect. The demonstration was just right too. It is one thing to read how to do something and quite another thing to do it yourself. While I have no oaks on my property I feel that I now know some of the basics of SOD. Enough so that I can hopefully steer gardeners in the right direction. Again-WELL DONE!" – Cie, Sebastopol

"I really wanted to let you all know how terrific your presentation was. It was interesting, fact filled, colorful (the photos were wonderful) and on a level that the public could understand. WONDERFUL JOB!" –Pat , Santa Rosa

"I believe this program is an invaluable component in creating both an awareness and dialog regarding SOD within our Sonoma County and greater northbay region. It is through education that we can calmly and accurately inform the public of what is "presently known" of Sudden Oak Death. Information is power...the power of knowledge to make thoughtful and caring choices on how we impact our environment." –Mimi, Santa Rosa

SOD Specialists average two outreach events per month. The following is a list of past events including number of people attending (contacts):

<b>Date</b>	<b>Location</b>	<b>Contacts</b>
7/12/2009	Fitch Mtn. Homeowner's Association, Healdsburg	100
7/28-8/3/2009	Sonoma County Fair	2,967
9/12/2009	Sebastopol Library	40
9/18-9/20/2009	The Late Show Garden Tour, Sonoma	50
9/19/2009	Pepperwood Preserve	15
10/2-10/4/2009	Sonoma County Harvest Fair	1,000
10/24/2009	Sonoma Valley Regional Library	30
11/7/2009	Rohnert Park 4H Center	12
12/5/2009	UCCE, Santa Rosa	32
July-Sept 2009	Educational materials and SOD specialists at Cotati, Healdsburg, Oakmont, Occidental, Petaluma, Santa Rosa, Sebastopol and Sonoma farmers' markets.	2,240
Ongoing	Friday, 6-7 pm. Radio show with SOD Specialist, 107.3 FM	Unknown
Ongoing	UC Master Gardener information desk is staffed 4-6 hours a day, 5 days a week. SOD questions are handled by MG staff or referred to MG SOD specialists.	Unknown
<b>Total contacts:</b>		<b>6,486</b>

### ***Other Education Fronts***

The beauty of this diverse group of volunteers is the variety of interests, skills and experiences. While some SOD Specialists are in their element standing up in front of an audience, others have different ideas for communicating the message. Ad hoc committees have sprung up to strengthen presentations and broaden the scope of the outreach program.

***Publicity and Scheduling.*** One of the master gardeners takes responsibility for keeping on top of publicity opportunities and scheduling presentations. A Press Democrat story is in the works for the spring SOD Blitz.

***Promotional Materials.*** Posters and postcards advertise the program's presentations and other sources for sudden oak death information. The first poster they made appears on the front cover of this report; a new poster is being designed.

***SOD Blitz.*** In collaboration with the Garbelotto lab, we will be hosting a Sonoma County SOD Blitz this spring 2010. The chance to participate in this "citizen scientist" project has energized the SOD Specialists. It will be approached in two ways. First, in order to fine-tune the *Phytophthora ramorum* distribution map of the

County, we will target areas for sampling that have few or no *P. ramorum* positive confirmations. Second, we will encourage people to sample in their own neighborhoods or favorite recreation spots to help them make informed decisions about preventive treatment use, sanitation, and potential hazards in areas where they live or play.



Postcards that promote upcoming outreach events are available at libraries, fairs and markets.

***Standardize Presentations.*** The SOD Specialists are developing a list of "core educational messages" so the group can keep everyone on the same page and give a rounded and relevant presentation. These core messages are based on what we know (the science), and what the public wants to know (comments and questions gathered from Sonoma County residents).

***Educational Materials.*** A desk reference, for Master Gardeners to use when fielding calls from the public, was put together to answer the basic questions about SOD. Aids for identifying common susceptible and non-susceptible oaks/tanoak are being prepared; one important fact that not all of our audience has grasped is that some oaks are not susceptible (and therefore do not need to be treated!). MGs teach tree identification based

on leaf, acorn and bark photos, drawings and specimens. Other educational material about landscape tree health, and forest health is distributed at meetings and fairs.

#### 4 Fulfilling objectives

The following are the objectives of this program, as listed in the grant proposal, and how we have fulfilled them.

*Objective 1: Further develop local SOD outreach to serve county needs.*

- The group stayed current with sudden oak death research and education by attending the 4<sup>th</sup> SOD Symposium, through the California Oak Mortality website, and by attending several training sessions presented by experts (see the **Training** section, page 3).
- The group provided outreach to 6,486 Sonoma County residents, tree professionals, Agri-Fos<sup>®</sup> suppliers, and firewood distributors; that is over 1,000 people per month (see list of outreach on page six of the **Outreach** section).
- SOD Specialists provided guidance on disease biology, symptom recognition, and prevention and suppression practices at meetings, fairs and markets, and through the Master Gardener front desk.
- They developed a website, <http://ucanr.org/sonomasod>, which provides an outreach schedule and links to SOD resources.
- They collected names and built a contact database of 187 residents and homeowners associations interested in keeping in the loop about SOD.
- The Master Gardeners tailored their presentations to meet the needs of Sonoma County residents.
- In order to find out what residents wanted, they developed an online survey. The following statements are from this survey, in answer to the question below.



"The making of a SOD Specialist". Master Gardeners listen intently to Doug Schmidt at a training session in China Camp State Park.

#### **“What are your concerns about sudden oak death?”**

“I'd like to protect the 6 mature oaks on my property from disease, particularly Sudden Oak Death. I have little experience in gardening or tree care.” –John, Santa Rosa

“I would like to learn more about the SOD problem so I can help my neighbors and myself fight the problem.” –Nancy, Petaluma

"I manage the nursery at Harmony Farm Supply & Nursery and am interested in attending one of the SOD classes. We're interested in have MG come and teach such a class but I'd like to experience it first. Can you send me times and dates for upcoming classes, please? Thanks a lot!" –Kirsten, Valley Ford

"I am interested in attending the discussion on December 5th. As an arborist and land manager, I want to keep abreast of the latest information available. Thanks." –Amy, Forestville

"I have a large live oak that is an important shade/aesthetic tree near our patio. Also have many oaks on my property." –Ann, Cloverdale

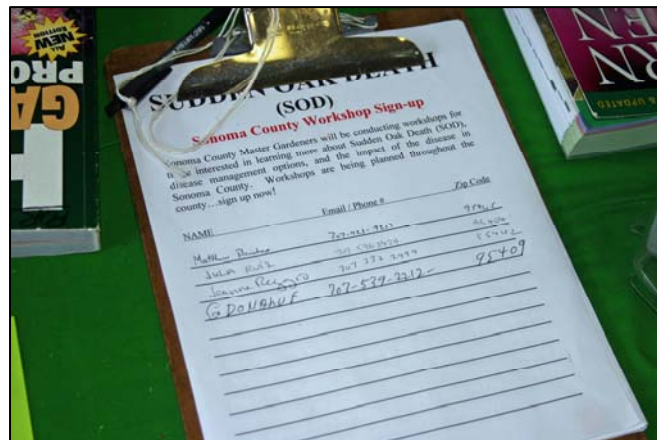
"What is the frequency of application recommended for Agrifos/PentaBark?" –Craig, Santa Rosa

"Have oaks on our property we want to protect." –Ian, Santa Rosa

"I would like to enroll in the Dec 5 workshop on SOD. I have 6 acres on Tilton Road in Sebastopol and have already lost some trees...more to come, surely." –Diane, Valley Ford

*Objective 2: Demonstrate SOD management techniques and provide information on fire safety practices to landowners & land managers.*

- Presented four workshops covering current SOD prevention/suppression methods: Agri-Fos<sup>®</sup> application; host removal; pruning; sanitation. 114 people attended.
- Distributed educational material (SOD resources, oak tree health, forestry practices), and contacted 6,498 people at nine presentations, nine farmers' markets, three fairs, and the Master Gardener reference desk. Fire safety questions were addressed by distributing the Fire Safe Sonoma booklet, "Living with Fire", which describes how to create defensible space around your home.



People sign up to be notified about SOD events at libraries, fairs, & markets. There are now 92 people on our mail/email list.

## 5 The Future

SOD Specialists will continue to expand their audience. We will deliver information on disease spread and sanitation practices to firewood sellers. There is a lot of infected and dead tanoak being cut and sold as firewood. Consumers don't want infected wood; firewood sellers need to know how to discourage disease spread.

SOD Specialists will continue presentations throughout the county, averaging two per month (see table below). They are planning a meeting with the Mendocino County Master Gardener group to see if this outreach program is something they want to do. After that, they would like to introduce the SOD program to Napa and Marin County Master Gardener groups.

### *Planned outreach*

More events will be added to this list of outreach events.

Date	Location
1/20/2010	Luther Burbank Center, Santa Rosa
2/6/2010	Healdsburg Library, Healdsburg
2/24/2010	Santa Rosa Junior College, Integrated Pest Mgmt. class presentation
3/13/2010	Armstrong Redwoods State Park, Guerneville
4/10/2010	Rohnert Park Library, Rohnert Park
4/16/2010	SOD Blitz meeting, Cloverdale
4/17/2010	SOD Blitz meeting, Healdsburg
4/17/2010	SOD Blitz meeting, Petaluma
5/22/2010	Rincon Valley Library, Rincon Valley
6/5/2010	Petaluma Library
6/6/2010	Bloomin' Backyards Garden Tour, Petaluma
May-Sept 2010	Farmers' markets throughout the County. Friday nights, 6-7 pm. Radio call-in show with an MG SOD Specialist,
Ongoing	KOWS, 107.3 FM, Occidental Master Gardener information desk is staffed 4-6 hours a day, 5 days a
Ongoing	week. For SOD information, residents are referred to SOD specialists.

### *SOD Blitz*

The main event for the spring is the April 17<sup>th</sup> weekend SOD Blitz, an event we will create in collaboration with the Garbelotto lab. The purpose is to educate the public about the disease by involving them in this "citizen science" project, and to get a better understanding of where *P. ramorum* does and does not exist. We'll use Oakmapper data and Forest Service aerial survey data to determine areas of interest throughout Sonoma County. Meetings will be held in Petaluma, Healdsburg, and Cloverdale. In order to collect leaf tissue samples throughout the County we will encourage residents to sample bays on their property, and we will enlist other groups to help collect samples on public lands. This will expand our outreach to include more people in rural areas and allow for collaboration with the following list of agencies.

***We will collaborate with:***

- Landpaths, a land stewardship and environmental education organization affiliated with the Sonoma County's Open Space District, ([www.landpaths.org](http://www.landpaths.org))
- Sonoma Land Trust
- Sonoma County UC Master Gardeners (200 people)
- Sonoma County Regional Parks
- CA State Parks
- Matteo Garbelotto lab, UC Berkeley

In summary, we plan to expand our audience to residents in more rural areas, other education and land management agencies (see list above), firewood sellers, and Master Gardener groups in surrounding counties. We will continue public presentations, continue cultivating volunteer educators within the Master Gardener group, and continue training sessions in order to keep current with SOD research and management practices and how they can be put to use in Sonoma County.



SOD Specialist, Marsha, poses in front a coast live oak killed by *P. ramorum* at China Camp SP. Two large limbs from this tree crashed to the ground during our June 2009 training session, perfectly illustrating to the Master Gardener trainees the falling and fire hazards of SOD-infected trees.